LTC 0498 Series Dinion2X Day/Night Camera

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Invented for life

- 20-bit Image Processing Technology
- CCD sensor with Wide Dynamic Range
- Dynamic engine with Smart BLC
- Detail enhancement
- True Day/Night performance with switchable filter

The LTC 0498 Dinion2X Day/Night camera is a high-performance, smart, surveillance camera. It uses a 1/3-inch, wide dynamic range CCD sensor and incorporates advanced (20-bit) digital signal processing for outstanding picture performance.
The 20-bit image processing enhances sensitivity; the 2X-Dynamic extends the dynamic range. This unique combination provides a sharper, more detailed image with outstanding accuracy in color reproduction even under harsh lighting conditions.
The Dinion2X camera is easy to install and ready to use, and offers the best solution for demanding scene conditions. The day/night feature ensures the highest image quality possible at any time. Depending on the available light the camera will automatically switch from color to monochrome.
All Dinion cameras are supplied ready to operate. Simply attach the lens, connect video and then power. Six distinct pre-programmed operational modes are stored in the camera. Recall the mode that suits your application for optimized performance.
The camera automatically detects the lens type. The lens wizard ensures accurate back-focusing for perfectly sharp pictures at all times. For especially challenging situations where fine tuning or special settings are required, the camera parameters can be individually set using the control buttons on the side of the camera and an On-screen Display (OSD).

Functions

Detail in Extreme Lighting
In harsh lighting, the difference between the brightest and the darkest parts of a scene can be extreme. To produce a clear picture in these conditions, the CCD sensor in the Dinion2X generates two images; one long exposure to resolve details in the scene's darkest areas, and one short exposure to resolve details in the scene's brightest areas. The Digital Signal Processor (DSP) of the Dinion2X combines these dual shutter images, mixing pixels from each exposure to produce the most detailed image possible.

20-bit Image Processing
The highly accurate digital signal processing optimally captures the detail in both bright highlights and deep shadows simultaneously. By combining 20-bit image processing and wide dynamic range, the Dinion2X maximizes the information visible in the picture even with strong backlighting.

Wide Dynamic Range
The superior wide dynamic range handling for all lighting conditions reveals details previously unseen.

2X-Dynamic and SmartBLC
Using 2X-Dynamic technology, pixel-by-pixel analysis provides the user with the most detailed information. Turn on SmartBLC to automatically compensate the image without the need for complicated set-up or without compromising dynamic range.

Detail Enhancement
Features such as Autoblack and Sharpness further improve the details in a scene, pixel by pixel.

Day/Night Mode
The day/night mode provides enhanced night viewing by increasing the IR sensitivity. The IR filter can switch from color to monochrome automatically by either sensing the illumination level or via the alarm input. The filter can be switched manually via the alarm input, through the camera menu or via the Bilinx coaxial control interface. An internal through-the-lens IR detector enhances the monochrome mode stability, as it prevents reverting to the color mode when IR illumination is dominant. IR contrast is also measured and used to handle reflected IR light in outdoor scenes.

Privacy masking
Four different privacy zones allow specific parts of a scene to be blocked. Pre-program any part of the scene to be masked.

Default Shutter
The default shutter speed captures fast moving objects when sufficient light is available. When light levels fall and other adjustments have been exhausted, the shutter speed reverts to a standard setting to maintain sensitivity.

Bilinx Technology
Bilinx is a bidirectional communication capability embedded in the video signal of all Bosch Dinion cameras. Technicians can check status, change camera settings and even update firmware from virtually anywhere along the video cable. Bilinx reduces service and installation time, provides for more accurate set-up and adjustment, and improves overall performance. In addition, Bilinx uses the standard video cable to transmit alarm and status messages, providing superior performance without additional installation steps.

Lens Wizard
The Lens Wizard automatically detects the lens type and helps focus the lens at the maximum opening to ensure proper focus is maintained throughout the 24-hour cycle. No special tools or filters are required.

Ease of installation
Several features are available that make installation easy:

- Power and alarm connections have cable connectors which can be removed even when the camera is mounted.
- A built-in test pattern generator produces signals to test and fault-find cables.
- A multi-language On-Screen Display (OSD) increases user compatibility.

Programmable Modes
Six independent, pre-programmed operating modes support typical applications, but are fully programmable for individual situations. Switching between modes is easy via Bilinx or the external alarm input.

High efficiency
A high efficiency power supply improves maximum operating temperature.

Video Motion Detection
The built-in video motion detector allows you to select a programmable area with individual thresholds. The global scene change detector minimizes false alarms caused by sudden lighting condition changes, such as switching on or off the indoor or security lighting. When motion is detected, alarms can be displayed in the video signal, the output relay can be closed or an alarm message can be transmitted via Bilinx.

SensUp Dynamic
By increasing the integration time up to 10 times on the CCD, the effective sensitivity is dramatically enhanced. This is especially useful when relying only on moonlight for illumination.

Typical applications:
- Entrance foyer or lobby with glare
- Outdoor perimeters
  - low light
  - IR light
- Traffic monitoring
  - highway
  - traffic intersections
  - emergency response coordination
- Tunnels
- Car parks (outdoor)
- Restricted access locations such as:
  - prisons
  - ports / freight terminals
  - military facilities
  - border control and homeland security
- Casino and gambling centers.

Certifications and approvals

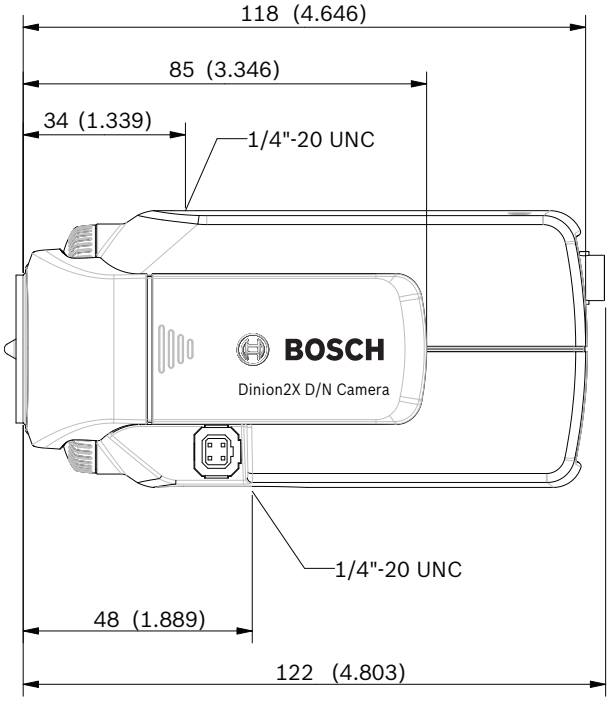
Electro Magnetic Compatibility	
Emission	EN55022 class B, FCC part 15 class B, EN6100-3, EN50121-4
Immunity	EN50130-4 (CE), EN50121-4 (CE)
Vibration	Camera with 500 gr (1.1 lbs) lens according to IEC60068-2-6
Safety	

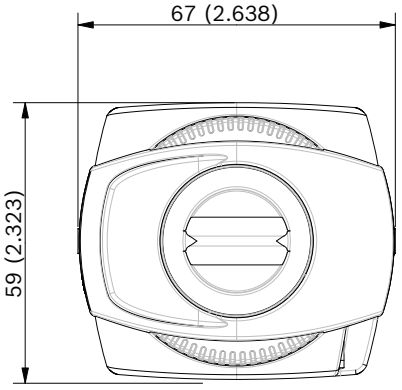
LTC0498/11: UL1950-1, CSA 22.2 No. 950-1, EN60950-1 (CE), UL60950, CAN/CSA No. 60950
LTC0498/51: UL1950-1, CSA 22.2 No. 950-1, EN60950-1 (CE), EN61000-3-2 2000 +A2:2005, EN61000-3-3 1995 +A1:2001 +A2:2005
LTC0498/21 and LTC0498/61: UL1950-1, CSA 22.2 No. 950-1, EN60950-1 (CE), UL60950, CAN/CSA No. 60950

Region	Certification	
Europe	CE	Declaration of Conformity
USA	UL	
	FCC	Declaration of Conformity
Canada	CSA	

Installation/configuration notes

Dimensions





mm (in)

Parts included

Quantity	Component
1	LTC 0498 Series Dinion2X Day\Night Camera
1	C/CS – mount conversion ring
1	Spare male 4 – pin lens connector
	Lens not included

Technical specifications

Electrical

Model No.	Rated Voltage	Rated Frequency
LTC 0498/11	24 VAC ±10%	50 Hz
	12 VDC ±10%	
LTC 0498/21	24 VAC ±10%	60 Hz
	12 VDC ±10%	
LTC 0498/51	230 VAC ±10%	50 Hz
LTC 0498/61	120 VAC ±10%	60 Hz

Power Consumption	350 mA (12 VDC) 250 mA (24 VAC) 70 mA (120-240 VAC)
CCD Type	1/3-inch interline, WDR dual shutter
Active Pixels	
PAL Model:	752 x 582
NTSC Model	768 x 494

Sensitivity (3200 K, scene reflectivity 89%, F1.2)

	Full video (100 IRE)	Usable picture (50 IRE)	Usable picture (30 IRE)
Color	2.4 lx (0.223 fc)	0.47 lx (0.044 fc)	0.15 lx (0.0139 fc)
Color + SensUp 10x	0.24 lx (0.0223 fc)	0.047 lx (0.00437 fc)	0.015 lx (0.00139 fc)
Monochrome	0.98 lx (0.091 fc)	0.188 lx (0.0174 fc)	0.060 lx (0.0056 fc)
Monochrome + SensUp 10x	0.098 lx (0.0091 fc)	0.019 lx (0.00176 fc)	0.0060 lx (0.000557 fc)

Horizontal Resolution	540 TVL
Signal-to-Noise Ratio	>50 dB
Video Output	Composite video 1 Vpp, 75 ohm

Synchronization	Internal, Line Lock, HV-lock and Genlock (Burst lock) selectable
Shutter	Auto (1/50 [1/60] to 1/10000) selectable Auto (1/50 [1/60] to 1/50000) automatic flickerless, fixed selectable
Sensitivity up	Adjustable from Off up to 10x
Day/Night	Color, Mono, Auto
Auto Black	Automatic continuous, Off
Dynamic engine	XF-Dynamic, 2X-Dynamic, SmartBLC
Dynamic range	120 dB (20-bit image processing)
Dynamic Noise Reduction	Auto, On/off selectable
Sharpness	Sharpness enhancement level selectable
SmartBLC	On (includes 2X-Dynamic) / Off
AGC	AGC On or Off (0 - 30 dB) selectable
Peak White Invert	On/Off
White Balance	ATW, ATWhold and manual (2500 to 10000K)
Alarm Output	VMD or Bilinx
Alarm Input (TTL)	Profile switching, +3.3 V nominal, +40 VDC max.
Alarm Output Relay	30 VAC or +40 VDC, Max 0.5 A continuous, 10 VA
External Synchronization Input	75 ohm or high impedance selectable
Cable Compensation	Up to 1000 m (3000 ft) coax without external amplifiers (automatic set-up in combination with Bilinx coaxial communication)
Camera ID	17 character editable string, position selectable
Test Pattern Generator	Color bars 100%, Grayscale 11-step, Sawtooth 2H, Checker board, Cross hatch, UV plane
Lens Types	Manual, DC- and Video-Iris auto-detect with override DC-iris drive: max. 50 mA continuous Video-iris: 11.5 VDC ±0.5, max. 50 mA continuous
Lens Mount	CS (max lens protrusion 5 mm, 0.2 inch), C-mount compatible with supplied adapter ring
Modes	6 preset programmable modes
Remote Control	Bilinx coaxial bi-directional communication
Video Motion Detection	One area, fully programmable
Privacy Masking	Four independent areas, fully programmable
Controls	OSD with soft-key operation (multi-lingual)

Mechanical

Dimensions (H x W x L)	58 x 66 x122 mm (2.28 x 2.6 x 4.8 inch) without lens
Weight	450 g (0.99 lbs) without lens
Color	RAL 9007 Metallic Titanium
Tripod Mount	Bottom (isolated) and top 1/4-inch 20 UNC

Environmental

Operating Temperature	-20°C to +55°C (-4°F to 131°F)
Storage Temperature	-40°C to +70°C (-40°F to +158°F)
Operating Humidity	20% to 93% RH
Storage Humidity	up to 98% RH

Ordering information

LTC 0498/11 Dinion 2X Day/Night Camera
1/3–inch, Advanced WDR, 540 TVL, PAL, 2X DSP, 24 VAC/12 VDC, 50 Hz
Order number **LTC 0498/11**

LTC 0498/21 Dinion 2X Day/Night Camera
1/3–inch, Advanced WDR, 540 TVL, NTSC, 2X DSP, 24 VAC/12 VDC, 60 Hz
Order number **LTC 0498/21**

LTC 0498/51 Dinion 2X Day/Night Camera
1/3–inch, Advanced WDR, 540 TVL, PAL, 2X DSP, 230 VAC, 50 Hz
Order number **LTC 0498/51**

LTC 0498/61 Dinion 2X Day/Night Camera
1/3–inch, Advanced WDR, 540 TVL, NTSC, 2X DSP, 120 VAC, 60 Hz
Order number **LTC 0498/61**

EX12LED8M LED Infrared Illuminator
Infrared w/ 42 LEDs, 850 nm, Med Beam 30°, 12/24 VRB, 0.5 amp, Photocell
Order number **EX12LED8M**

EX12LED9M LED Infrared Illuminator
Infrared w/ 42 LEDs, 940 nm, Med Beam 30°, 12/24 VRB, 0.5 amp, Photocell
Order number **EX12LED9M**

EX12LED8W LED Infrared Illuminator
Infrared w/ 42 LEDs, 850 nm, Wide Beam 60°, 12/24 VRB, 0.5 amp, Photocell
Order number **EX12LED8W**

EX12LED9W LED Infrared Illuminator
Infrared w/ 42 LEDs, 940 nm, Wide Beam 60°, 12/24 VRB, 0.5 amp, Photocell
Order number **EX12LED9W**

EX12LED-3BD-8M Infrared Illuminator
EX12LED IR Illuminator, 850 nm, 30 deg beam
Order number **EX12LED-3BD-8M**

EX12LED-3BD-8W Infrared Illuminator
EX12LED, IR Illuminator, 850 nm, 60 deg beam
Order number **EX12LED-3BD-8W**

EX12LED-3BD-9M Infrared Illuminator
EX12LED IR Illuminator, 940 nm, 30 deg beam
Order number **EX12LED-3BD-9M**

EX12LED-3BD-9W Infrared Illuminator
EX12LED, IR Illuminator, 940 nm, 60 deg beam
Order number **EX12LED-3BD-9W**

LTC 3364/21 Varifocal Lens IR corrected
1/3-inch, 2.8 – 6 mm, DC-iris, CS-mount F1.4-200, 4-pin
Order number **LTC3364/21**

LTC 3674/20 Varifocal Lens IR corrected
1/3-inch, 7.5 – 50 mm, DC-iris, CS-mount F1.3-360, 4-pin
Order number **LTC 3674/20**

LTC 3764/20 Varifocal Lens IR corrected
1/2-inch, 4 – 12 mm, DC-iris, C-mount F1.2-360, 4-pin
Order number **LTC 3764/20**

LTC 3774/30 Varifocal Lens IR corrected
1/2-inch, 10 – 40 mm, DC-iris, C-mount F1.4-360, 4-pin
Order number **LTC 3774/30**

TC8235GIT Ground Loop Isolation Transformer
Order number **TC8235GIT**

UPA-2410-60 Power Supply
120 VAC, 60 Hz, 24 VAC, 10 VA Out
Order number **UPA-2410-60**

UPA-2430-60 Power Supply
120 VAC, 60 Hz, 24 VAC, 30 VA Out
Order number **UPA-2430-60**

UPA-2450-60 Power Supply, 120 V, 60 Hz
Indoor, 120 VAC, 60 Hz In; 24 VAC, 50 VA Out
Order number **UPA-2450-60**

UPA-2420-50 Power Supply
220 VAC, 50 Hz, 24 VAC, 20 VA Out
Order number **UPA-2420-50**

UPA-2450-50 Power Supply, 220 V, 50 Hz
Indoor, 220 VAC, 50 Hz In; 24 VAC, 50 VA Out
Order number **UPA-2450-50**

Accessories

LTC 3664/40 Varifocal Lens IR corrected
1/3-inch, 2.8 – 11 mm, DC-iris, CS-mount F1.4-360, 4-pin
Order number **LTC3664/40**

S1374 Adapter
converts C mount lens to CS mount camera
Order number **S1374**

Software Options

VP-CFGSFT Configuration Software
for cameras using Bilinx, includes VP-USB Adaptor
Order number **VP-CFGSFT**

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